

**FOREST EXCISE TAX -- ROAD SUMMARY SHEET**

**Region:** Southeast

**Timber Sale Name:** Naneum High

**Agreement Number:** #72999

**Excise Tax Applicable Activities**

**Construction:** 0 linear feet

*Road to be constructed (optional and required) but not abandoned*

**Reconstruction:** 0 linear feet

*Road to be reconstructed (optional and required) but not abandoned*

**Abandonment:** 0 linear feet

*Abandonment of existing roads not reconstructed under the contract*

**Deactivation:** 0 linear feet

*Road to be made undriveable but not officially abandoned.*

**Pre-Haul Maintenance:** 5710 linear feet

*Existing road to receive maintenance work (specifically required by the contract) prior to haul*

**Excise Tax Exempt Activities**

**Temporary Optional Construction:** 0 linear feet

*Optional roads to be constructed and then abandoned*

**Temporary Optional Reconstruction:** 0 linear feet

*Optional roads to be reconstructed and then abandoned*

**New Abandonment:** 435 linear feet

*Abandonment of roads constructed or reconstructed under the contract*

All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

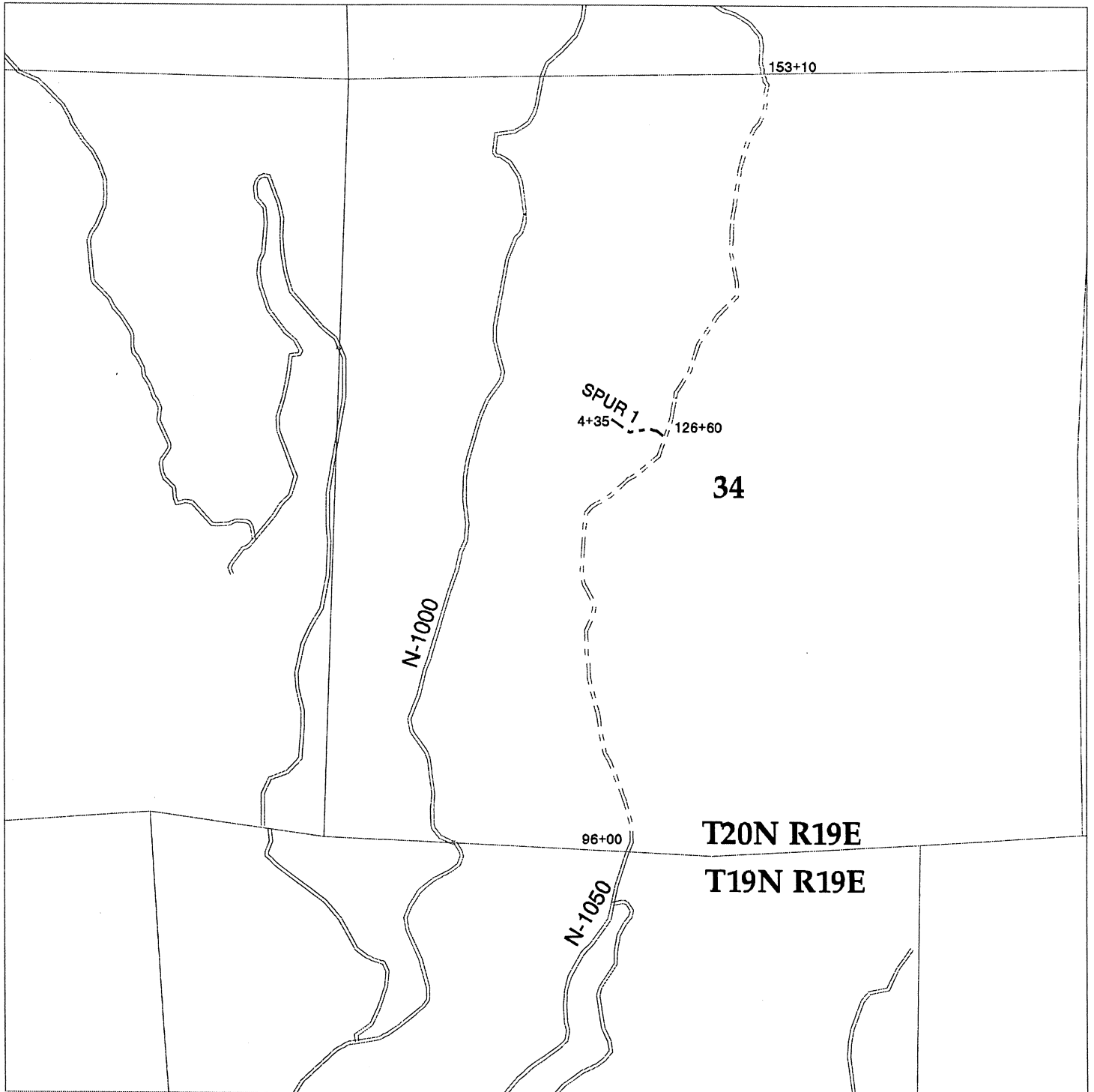
(Revised 7/04)

# ROAD PLAN

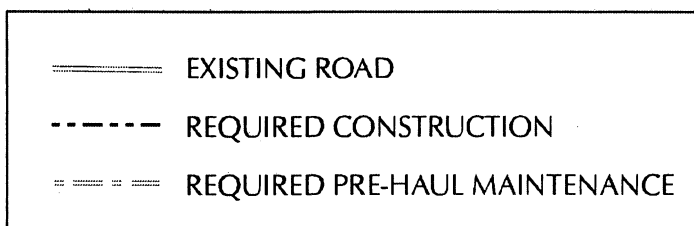
SALE NAME: NANEUM HIGH  
AGREEMENT NO.: 72999  
GRANT: Indemnity

REGION: Southeast  
COUNTY: Kittitas

TOWNSHIP 20 NORTH RANGE 19 EAST, W.M.



SCALE 1:12,000



October 10, 2003

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES  
DOUG SUTHERLAND, COMMISSIONER OF PUBLIC LANDS

TIMBER SALE ROAD PLAN  
SECTION 34, TOWNSHIP 20 NORTH, RANGE 19 EAST, W.M.  
KITITITAS COUNTY

AGREEMENT NO.: 72999

DATE: SEPTEMBER 1, 2004

SECTION 0 - SCOPE OF PROJECT

This project includes but is not limited to construction including:

clearing;  
grubbing;  
right of way debris disposal;  
excavation and/or embankment to subgrade;  
acquisition and application of grass seed and fertilizer;  
road abandonment (post haul).

This project includes, but is not limited to pre-haul maintenance including:

brushing right of way (between clearing flags and tags);  
right of way debris disposal;  
grading and shaping existing road surface and turnouts;  
installation of rolling dips;  
acquisition and application of grass seed and fertilizer;  
road deactivation.

SECTION 1: GENERAL CLAUSES

SECTION 1.1: GENERAL: GENERAL CLAUSES

1.1-1

Clauses in this plan apply to all construction, pre-haul maintenance or purchaser maintenance including landings unless otherwise noted.

1.1-2

Construction, pre-haul maintenance, or purchaser maintenance of the following roads is required. All roads shall be constructed or pre-haul maintained on the State's location and in accordance with this Road Plan.

<u>Road</u>	<u>Station</u>	<u>Type</u>
N-1050	0+00 to 96+00	Purchaser Maintenance
N-1050	96+00 to 153+10	Pre-haul Maintenance
Spur 1	0+00 to 4+35	New Construction

1.1-4

If the purchaser desires a road location or design change, a revised road plan shall be submitted to the State for consideration.

1.1-9

On this plan quantities are minimum acceptable values. Additional quantities required by the State because of hidden conditions or Purchaser's choice of construction season or techniques shall be at the Purchaser's expense. Hidden conditions include, but are not limited to: solid subsurface rock subsurface springs, saturated ground, and unstable soil.

SECTION 1.2 - GENERAL: CONSTRUCTION CONSTRAINTS

1.2-1

The construction, pre-haul maintenance or purchase maintenance of any roads specified herein shall not be permitted between October 31 and May 1 unless authority to do so is granted, in writing, by the Contract Administrator.

<u>Road</u>	<u>Station</u>
N-1050	0+00 to 153+10
Spur 1	0+00 to 4+35

1.2-2

Purchaser shall not use roads constructed or maintained under this Road Plan for hauling, other than timber cut on the right of way, without written approval from the Contract Administrator.

SECTION 1.2.1 - GENERAL: CONSTRUCTION CONSTRAINTS:  
CONSTRUCTION SEQUENCE

1.2.1-1

Pioneering shall not extend past construction that will be completed during the current construction season. Drainage shall be provided on all uncompleted construction as approved, in writing, by the Contract Administrator.

Clearing and grubbing shall be completed prior to starting excavation and embankment.

Rolling dips shall be installed in completed subgrade as construction progresses.

Subgrade and rolling dip installation shall be completed and are subject to written approval by the Contract Administrator prior to timber haul.

SECTION 1.5 - GENERAL: ROAD MAINTENANCE

1.5-1

Maintenance on the following roads shall be performed in accordance with Forest Access Road Maintenance Specifications.

<u>Road</u>	<u>Stations</u>
N-1050	0+00 to 153+10
Spur 1	0+00 to 4+35

1.5-2

Per Clause C-60, maintenance on the following road shall be performed by designated maintainer. Designated maintainer shall be selected by the Contract Administrator.

<u>Road</u>	<u>Station</u>
N-1000	0+00 to 133+60

1.5-3

On the following roads, snowplowing shall not be permitted unless authorized, in writing, by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
N-1000	0+00 to 133+60
N-1050	0+00 to 153+10

1.5-4

At termination of haul final maintenance shall be performed on the following road. At minimum, final maintenance shall consist of blading the road with a motor grader, removing berms, crowning or outsloping the road as specified in the Typical Section Sheet and/or Clause 6.1-1, reshaping rolling dips and/or water bars to specification, pulling ditches and cleaning culvert inlets and outlets. The finished road surface shall drain freely and shall be smooth, firm and free of chuckholes.

<u>Road</u>	<u>Stations</u>
N-1000	0+00 to 96+00

SECTION 2 - CLEARING

SECTION 2.1 - R/W TIMBER

2.1-1

On the following road, fell all vegetative material larger than 2 inches dbh or over 4 feet high between the marked right-of-way boundaries and clearing flags.

<u>Road</u>	<u>Stations</u>
N-1000	96+00 to 153+10

SECTION 3 - GRUBBING

SECTION 3.1- GRUBBING: GENERAL

3.1-1

All stumps shall be removed that fall between grubbing limits shown on the Typical Section Sheet. Those with undercut roots shall be removed.

3.1-2

Grubbing limits are defined as the entire area between the external limits shown on the Typical Section Sheet.

SECTION 4 - DEBRIS DISPOSAL AND REMOVAL

SECTION 4.1 - DEBRIS DISPOSAL AND REMOVAL: GENERAL

4.1-1

Right-of-way debris is defined as all non-merchantable vegetative material larger than one cubic foot in volume, within the grubbing limits.

SECTION 4.2 - DEBRIS DISPOSAL AND REMOVAL: PLACEMENT

4.2-1

On the following road, right-of-way debris shall be scattered outside the clearing limits.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 4+35

4.2-2

Right-of-way debris shall not be placed against standing timber.

4.2-3

On the following road, right-of-way debris shall be scattered outside the clearing limits on the downhill side of the road.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

SECTION 5 - EXCAVATION

SECTION 5.1 - EXCAVATION: GENERAL

5.1-1

Unless controlled by construction stakes or specific design sheets herein, roads shall be constructed in accordance with dimensions shown on the Typical Section Sheet.

5.1-2

Purchaser shall not bury merchantable material.

5.1-3

On the following road, road grade and alignment shall conform to the State's marked location and drawings. Grade and alignment shall have smooth continuity without abrupt changes in direction. Maximum grades and minimum curve radii are as listed below.

<u>Road</u>	<u>Stations</u>	<u>Min. Rad</u>	<u>Max. Grade</u>	
			<u>Favorable</u>	<u>Adverse</u>
Spur 1	0+00 to 4+35	100'	6%	6"

5.1-6

On the following road, the existing subgrade shall be widened to the dimensions shown on the Typical Section Sheet.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

5.1-7

Roads shall be constructed or reconstructed to the dimensions shown on the Typical Section Sheet, within the tolerance listed below. Tolerance classes for each road are listed on the Typical Section Sheet.

Tolerance Class	A	B	C
Road Width (feet)	+1.5	+1.5	+2.0
Subgrade elevation (feet+/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

5.1-8

Excavation slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>
Common Earth (on side slopes of 55%).....	1:1
Common Earth (55% to 70% sideslopes).....	¾:1
Common Earth (on slopes over 70%).....	½:1
Fractured or loose rock.....	½:1
Hardpan or Solid rock.....	¼:1

5.1-9

Excavation and embankment slopes shall be constructed to a uniform line and left rough for easier revegetation.

5.1-10 Except as construction staked or designed. Embankments shall be widened as follows:

<u>Height at Centerline</u>	<u>Subgrade Widening</u>
Less than 6 feet.....	2 feet
6 feet or over.....	4 feet

5.1-11 Embankment slopes shall be constructed no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>
Common Earth and rounded gravel	1-1/2:1
Angular rock	1-1/4:1
Sandy soil	2:1

5.1-12 Organic material shall be excluded from embankment.

5.1-14 Waste material may be deposited adjacent to the road prism on side slopes up to 55 percent if the waste material is compacted and more than 100 feet away from live streams. On side slopes of 55 percent or more, all excavation shall be end hauled or pushed to designated embankment sites. All waste embankments shall be compacted in horizontal layers not exceeding 2 feet.

5.1-16 On the following road, when constructing landing, waste material and embankment shall not be placed on side slopes steeper than 55%.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

5.1-21 Waste material shall not be deposited within 50 feet of a cross drain culvert or 100 feet of a live stream.

5.1-22 On the following road, existing turnouts shall be reconstructed.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

SECTION 5.2 - EXCAVATION: PIONEER ROADS

5.2-1 Road pioneering operations shall not undercut the final cut slope, deposit excavated material outside the clearing limits or restrict drainage.

SECTION 5.3 - EXCAVATION: COMPACTION

5.3-1 All embankment and waste material shall be compacted. The minimum acceptable compaction is achieved by placing embankments in 2 foot or shallower lifts and routing excavation equipment over the entire width of the lifts. Sidehill embankments too narrow to accommodate excavation equipment may be placed by end dumping or side casting until sufficiently wide to support the equipment.

SECTION 5.4 - EXCAVATION: SEDIMENTATION

5.4-1

Sediment bearing runoff shall not be permitted to enter into streams.

SECTION 5.5 - EXCAVATION: SUBGRADE COMPACTION

5.5-1

Finished subgrade shall be shaped as specified in Clause 6.1-1 and as shown on the Typical Section Sheet. Surface shall be graded and compacted to a uniform, firm, rut-free surface to ensure runoff in an even, unconcentrated manner.

SECTION 6 - DRAINAGE

SECTION 6.1 - DRAINAGE: SURFACE DRAINAGE

6.1-1

On the following roads, surfaces shall be shaped to augment the escape of surface runoff.

<u>Road</u>	<u>Stations</u>	<u>Shape of Road Surface</u>
N-1050	0+00 to 153+10	Outslope 4 inches in 10 feet.
Spur 1	0+00 to 4+35	Outslope 4 inches in 10 feet.

6.1-2

Berms shall be removed from road shoulders to permit escape of runoff.

SECTION 6.3 - DRAINAGE: DITCHES

6.3-1

Ditches shall be constructed in accordance with dimensions shown on the Typical Section Sheet and shall drain12 freely to culverts, rolling dips and ditchouts.

6.3-2

On the following road, reshaping the ditch line shall be completed prior to timber haul and shall be done in accordance with the Typical Section Sheet and Standard Details Culvert and Drainage Specification Details.

<u>Road</u>	<u>Stations</u>
N-1050	11+85 to 14+50*
N-1050	31+15 to 32+00*
N-1050	71+80 to 77+65*

\*Falls under purchaser maintenance

SECTION 6.4 - DRAINAGE: CATCHBASINS

6.4-1

On the following road, all inlet and outlets of culverts shall be cleaned before the start of timber haul.

<u>Road</u>	<u>Stations</u>
N-1050	14+50
N-1050	31+15
N-1050	71+80

SECTION 6.7: DRAINAGE: ROLLING DIPS



6.7-1

On the following roads rolling dips shall be constructed in accordance with the Rolling Dip Detail sheet at locations as specified on the Rolling Dip List. **ROLLING DIPS SHALL BE INSTALLED AT THE TIME OF CONSTRUCTION AND SHALL BE CONTINUOUSLY MAINTAINED IN AN OPERABLE CONDITION.** Rolling dips shall be installed with a crawler tractor. Use of other equipment shall not be permitted without prior written approval of the Contract Administrator.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

SECTION 9 - ROAD AND LANDING CLOSURES/DEACTIVATION

SECTION 9.1 - ROAD AND LANDING DEACTIVATION: ROAD DEACTIVATION

9.1-1

The following road shall be deactivated by the purchaser at the termination of use within 30 days following completion of timber haul, unless otherwise specified, by the Contract Administrator in writing.

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

9.1-2

On the following roads, deactivation shall consist of:

- shaping the road surface to that specified in Clause 6.1-1;
- constructing drivable water bars in conformance with the attached "Drivable Water Bar Detail" at a spacing which will produce a vertical drop of no more than 30 feet between water bars and with a maximum spacing of 300 feet, or at locations as directed by the Contract Administrator;
- skewing water bars at least 30 degrees from perpendicular on roads in excess of 3 percent grade;

<u>Road</u>	<u>Stations</u>
N-1050	96+00 to 153+10

9.1-3

On the following road, deactivation shall consist of:

Revegetation of landings, cut slopes and fill slopes. Application rate shall be 35 lbs of seed mix per acre and 60 lbs. of fertilizer per acre. Seed mix shall be: intermediate wheatgrass 10 lbs. per acre, smooth brome 10 lbs. per acre, hard fescue 10 lbs. per acre. Seed shall be certified. Fertilizer shall be 16-16-16 or other fertilizer as approved in writing by the contract administrator. Seed and fertilizer shall be applied between October 1 and November 15.

<u>Road</u>	<u>Stations</u>	<u>Estimated Quantity*</u>
N-1050	96+00 to 153+10	69 lbs grass seed/123 lbs fertilizer

\*Quantities are estimate only. Actual quantities may vary and are the responsibility of the purchaser.

SECTION 10 - ROAD AND LANDING ABANDONMENT

10.1-1

The following road shall be abandoned by the purchaser at the termination of use within 30 days following completion of timber haul, unless otherwise specified by the Contract Administrator, in writing.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 4+35

10.1-2

On the following road, abandonment shall consist of:

- ripping the road surface to a minimum depth of six inches;
- constructing two undrivable water bars at locations as directed by the Contractor Administrator and in conformance with the attached Undrivable Waterbar Detail sheet;
- skewing undrivable water bars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3% grade.

<u>Road</u>	<u>Stations</u>
Spur 1	0+00 to 4+35

10.1-3

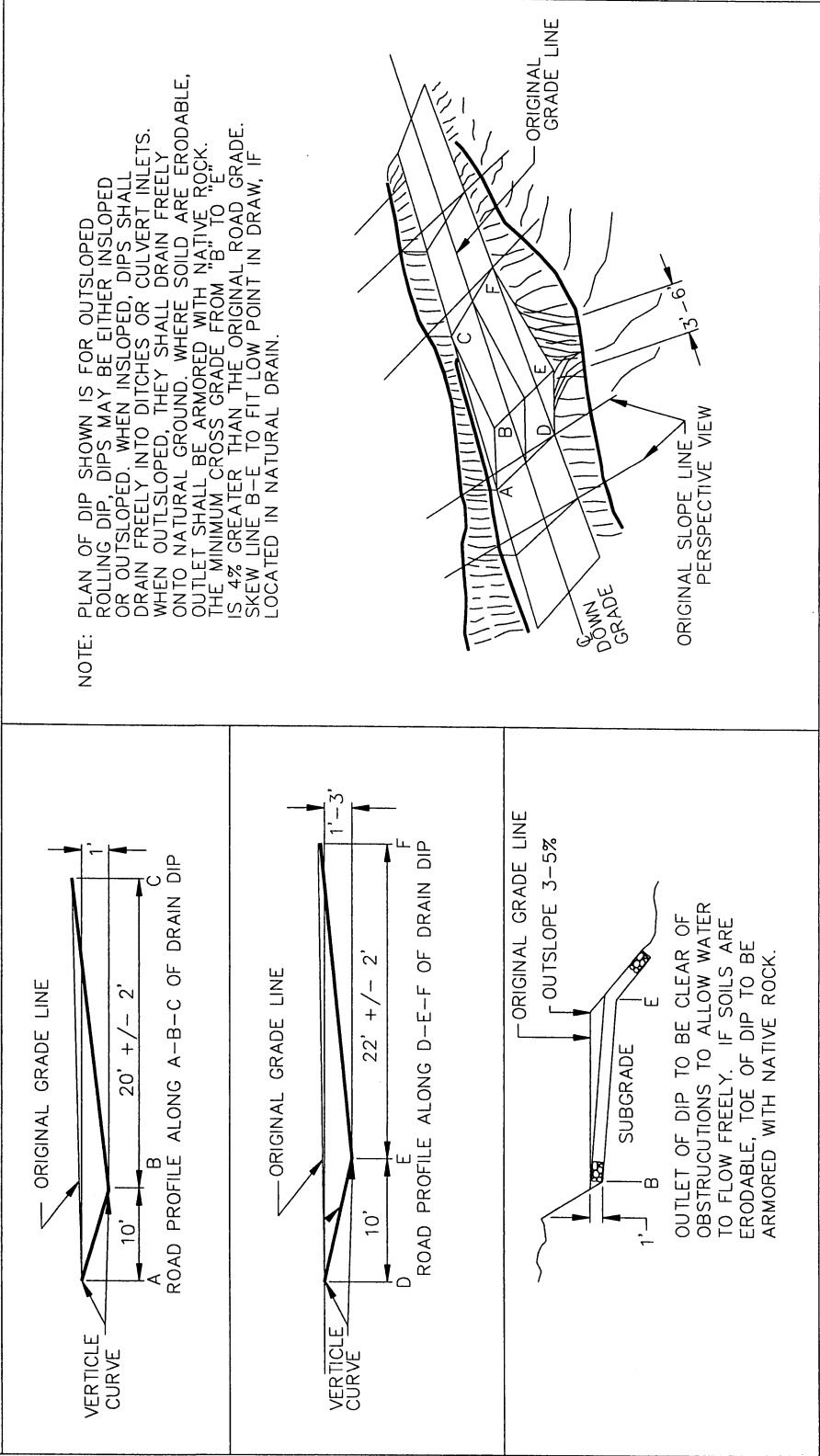
On the following roads, abandonment shall consist of:  
Revegetation of landings, cut slopes, road surface and fill slopes. Application rate shall be 35 lbs of seed mix per acre and 60 lbs. of fertilizer per acre. Seed mix shall be: intermediate wheatgrass 10 lbs. per acre, smooth brome 10 lbs. per acre, hard fescue 10 lbs. per acre. Seed shall be certified. Fertilizer shall be 16-16-16 or other fertilizer as approved in writing by the contract administrator. Seed and fertilizer shall be applied between October 1 and November 15.

<u>Road</u>	<u>Stations</u>	<u>Estimated Quantity*</u>
Spur 1	0+00 to 4+35	9 lbs grass seed/ 16 lbs fertilizer

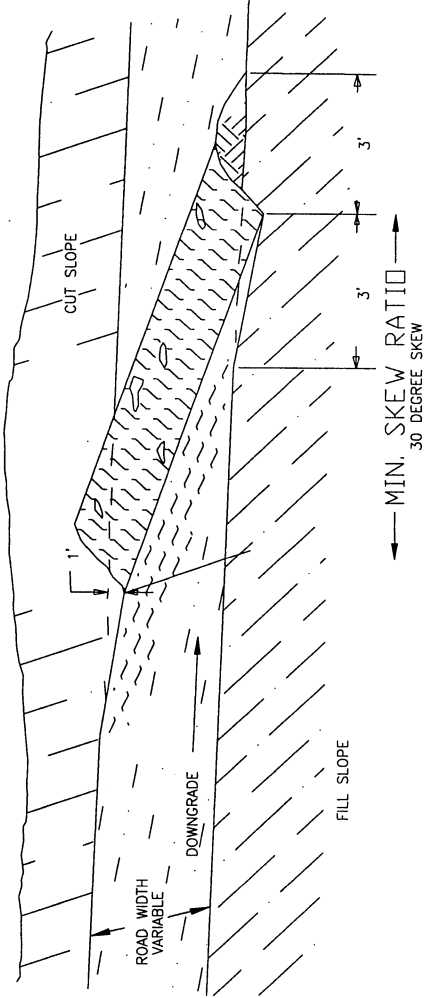
\*Quantities are estimate only. Actual quantities may vary and are the responsibility of the purchaser.



ROLLING DIP DETAIL



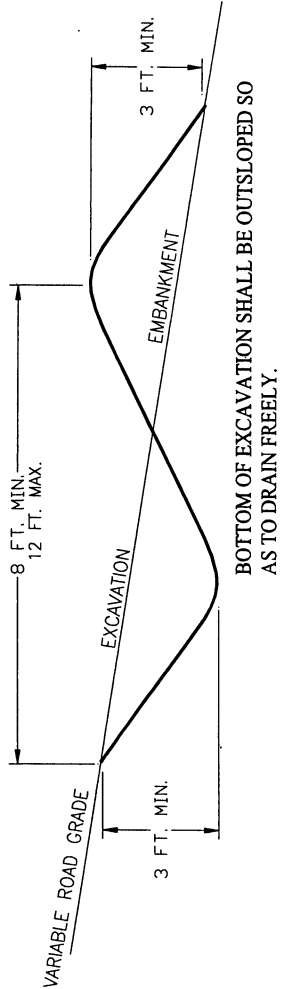
DRIVABLE WATER BAR DETAIL



NOTES

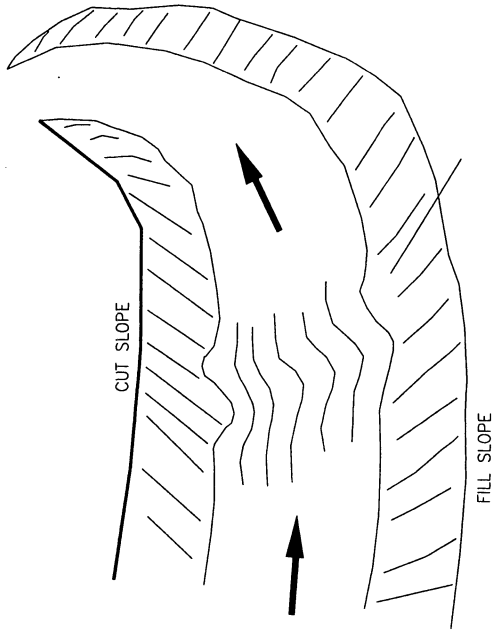
1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.

# UNDRIVABLE WATER BAR DETAIL



PROFILE VIEW

NOTE: EMBANKMENT SIDE OF UNDRIVABLE WATER BAR SHALL BE PLACED IN ON SIDE VEHICLE TRAFFIC WILL BE COMING FROM.



METHOD OF INSTALLATION

ROLLING DIP LIST

<u>ROAD</u>	<u>STATION</u>	<u>REMARKS</u>
N-1050	103+00	CONSTURCT AS PER DETAIL
N-1050	110+80	CONSTURCT AS PER DETAIL
N-1050	116+75	CONSTURCT AS PER DETAIL
N-1050	121+00	CONSTURCT AS PER DETAIL
N-1050	125+65	CONSTURCT AS PER DETAIL
N-1050	129+35	CONSTURCT AS PER DETAIL
N-1050	142+55	CONSTURCT AS PER DETAIL
N-1050	145+20	CONSTURCT AS PER DETAIL W/ LEAD-OUT

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

FOREST ACCESS ROAD  
MAINTENANCE SPECIFICATIONS

A. Cuts and Fills

1. Maintain slope lines as constructed. Remove slides from the ditches and roadway. Replace fills to 1 1/2:1 slopes with selected material or as directed. Remove overhanging material from the cut slopes.
2. Material from slides or other sources requiring removal shall not be deposited in streams or at locations where it will erode into streams or watercourses.
3. Undesirable slide materials and debris shall not be mixed into the surface material.

B. Surface

1. Grade and shape the road surface, turnouts, and shoulders to the original crown, inslope or outslope as directed to provide suitable traveled surface and surface water runoff in an even, unconcentrated manner.
2. Blading must not undercut the backslope at the bottom of the ditchline or cut into geotextile fabric on the road.
3. If required in writing by the SE Region Engineer, water shall be applied as necessary to abate dust.
4. Desirable surface material shall not be bladed off the roadway.
5. Replace surface material lost or worn away.
6. Remove berms except as directed by the State.
7. Barrel spread soft spots to prevent degradation of geotextile.

C. Drainage

1. Keep ditches and drainage channels at outlets and inlets of culverts clear of obstructions and functioning as intended.
2. Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This must be done even during periods of inactivity.
3. Add stable material at the outlet end of the cross drain culvert as needed to stabilize the soil.
4. Headwalls: maintain to the road shoulder level with material that will resist erosion.
5. Prevent sediment bearing surface runoff from entering live streams.

D. Structures

Repair bridges, culverts, cattle guards, fences, and other road structures to the condition required by the construction specifications.

E. End of Season

Do maintenance work to minimize damage from the elements such as blading to insure correct runoff, ditch, and culvert cleaning and water bars.

F. Debris

Remove fallen timber, limbs, and stumps from the slopes or roadway.